TECHNICAL UNIVERSITY OF MOMBASA

FACULTY OF APPLIED AND HEALTH SCIENCES

DEPARTMENT OF MEDICAL SCIENCES

UNIVERSITY EXAMINATION FOR:

BMLS 14S MID/15M MID

AML 4313: EPIDEMIOLOGY

END OF SEMESTER EXAMINATION

SERIES: APRIL 2016

TIME: 2HOURS

DATE: Pick DateSelect MonthPick Year

Instructions to Candidates
You should have the following for this examination
-Answer Booklet, examination pass and student ID
This paper consists of Choose Nochoose Sect/Quest. AttemptChoose instruction.
Circle the correct answer in section A.

Section A

1. Which one of the following is included in the "epidemiologic triad"
   a. Determinants
   b. Time
   c. Host
   d. Behavioral factors

   e. None of the above

2. The "natural history of disease" refers to:
   a. The progress of a disease in an individual over time
   b. The period between exposure and first Symptoms
   c. The period from first symptoms to recovery, Disability, or death
   d. The broad scope of manifestations of a disease in different individuals
   e. All of the above

3. A disease that occurs rarely and without regularity is said to be:
   a. Sporadic
   b. Endemic
   c. Epidemic
   d. Hyperendemic
   e. Pandemic

4. Which of the following can act as a portal?
   a. Skin
   b. Cardiovascular system
   c. Animals
   d. Plants
   e. Kidneys

5. Hosts that harbor a specific infectious agent while manifesting no discernable signs or symptoms are called:
   a. Portals
   b. Vectors
   c. Vehicles
   d. Carriers
   e. Symbionts

6. Sensitivity of a screening test is

   a. The ability to correctly identify individuals who have a specific disease

   b. The ability to correctly identify individuals who do not have a specific disease

   c. The ability to be as reliable as possible

   d. The ability to be as precise as possible

   e. None of the above

7. The negative predictive value of a screening test is the proportion of

   a. true positives among all positives

   b. true negatives among all negatives

   c. false positives among all positives

   d. false negatives among all negatives

   e. All negative values

8. A study in which children are randomly assigned to receive either a newly formulated vaccine or the currently available vaccine, and are followed to monitor for side effects and effectiveness of each vaccine, is an example of which type of study?
   a. Observational
   b. Cohort

    c. Case-control

    d. Clinical trial

    e. Crossectional

9. The Iowa Women's Health Study, in which researchers enrolled 41,837 women in 1986 and collected exposure and lifestyle information to assess the relationship between these factors and subsequent occurrence of cancer, is an example of which type(s) of study?

    a. Experimental

    b. Crossectional

    c. Cohort

    d. Case-control

    e. Clinical trial

10. British investigators conducted a study to compare measles-mumps-rubella (MMR) vaccine history among 1,294 children with development disorder and 4,469 children without such disorders. This is an example of which type(s) of study?

    a. Experimental

    b. Crossectional

    c. Cohort

    d. Case-control

    e. Clinical trial

11. A cohort study differs from a case-control study in that:

    a. Subjects are enrolled or categorized on the basis of their exposure status in a cohort study but not in a case-control study

    b. Subjects are asked about their exposure status in a cohort study but not in a case-control study

    c. Cohort studies require many years to conduct, but case-control studies do not

    d. Cohort studies are conducted to investigate chronic diseases, case-control studies are used for infectious diseases

    e. None of the above

12. The following are features of a cross-sectional study except:

    a. It usually provides information on prevalence

    b. It usually provides information on incidence

    c. It isuseful for studying health exposures and behaviors

    d. It is more useful for descriptive epidemiology than it is for analytic epidemiology

    e. It is synonymous with survey

13. The epidemiologic triad of disease causation refers to

    a. Agent, host, environment

    b. Time, place, person

    c. Source, mode of transmission, susceptible host

    d. John Snow, Robert Koch, Kenneth Rothman

    e. Michael, Socrates, John Snow

14. A reservoir of an infectious agent can be:

    a. An asymptomatic human

    b. A symptomatic human

    c. An animal

    d. The environment

    e. None of the above

15. Disease control measures are generally directed at which of the following?

    a. Eliminating the reservoir

    b. Eliminating the vector

    c. Eliminating the host

    d. Interrupting mode of transmission

e. Reducing host susceptibility

16. Indirect transmission includes which of the following?
    a. Droplet spread
    b. Mosquito-borne
    c. Foodborne
    d. Water borne
    e. Doorknobs or toilet seats
17. To study the causes of an outbreak of aflatoxin poisoning in Africa, investigators conducted a case-control study with 40 case-patients and 80 controls. Among the 40 poisoning victims, 32 reported storing their maize inside rather than outside. Among the 80 controls, 20 stored their maize inside. The resulting odds ratio for the association between inside storage of maize and illness is:
    a. 3.2
    b. 5.2
    c. 12.0
    d. 33.3
    e. 8
18. The following are true of the following fraction except?

    Number of deaths due to septicemia among men aged 65–74 years in 2004
    _____
    Estimated number of men aged 65–74 years alive on July 1, 2004

    a. Age-specific mortality rate
    b. Measure of frequency of mortality
    c. Cause-specific mortality rate
    d. Sex-specific mortality rate
    e. Measure of disease frequency
19. Public health surveillance includes the following activities except?
    a. Data collection.
    b. Data analysis.
    c. Data interpretation.
    d. Data dissemination.
    e. Disease control.
20. Public health surveillance can be described primarily as which of the following?
    a. A method to monitor occurrences of public health problems.
    b. A program to control disease outbreaks.
    c. A system for collecting health-related information.
    d. A system for monitoring persons who have been exposed to a communicable disease.
    e. All of the above
21. The following health health related events are targeted by public health surveillance except?
    a. Chronic diseases.
    b. Communicable diseases.
    c. Health-related behaviors.
    d. Occupational hazards.
    e. None of the above

22. Common uses and applications of public health surveillance include the following except?
    a. Detecting individual persons with malaria so that they can receive prompt and appropriate treatment.
    b. Helping public health officials decide how to allocate their disease control resources.
    c. Identifying changes over time in the proportion of children with elevated blood lead levels in a community.
    d. Documenting changes in the incidence of varicella (chickenpox), if any, after a law requiring varicella vaccination took effect.
    e. None of the above
23. A study was made of a clinician's ability to diagnose streptococcal throat infections in 149 patients coming to the emergency department in a certain hospital. The doctor's clinical impressions were compared to results of throat cultures or group A streptococcus. 37 patients had positive throat cultures and 27 of these were diagnosed by doctor as having strep throat. 112 patients had negative cultures, and the doctors diagnosed 35 of these as having strep throat. The specificity of the doctors' clinical judgment was:
    a. 27/37
    b. 77/112
    c. 27/62
    d. 10/87
    e. 104/149
24. From the study in Question 3, the predictive value of the doctors' clinical judgment for streptococcal sore throat was:
    a. 27/37
    b. 77/112
    c. 27/62
    d. 10/87
    e. 104/149
25. Which of the following is a tool used in outbreak investigation?
    a. Endemic curve
    b. Line List
    c. Seasonal trend
    d. Secular trend
    e. None of the above
26. The hallmark feature of an analytic epidemiologic study is
    a. Use of an appropriate comparison group
    b. Laboratory confirmation of the diagnosis
    c. Publication in a peer-reviewed journal
    d. Statistical analysis using logistic regression
    e. None of the above
27. The following terms include the host factors influencing the development of a health related event except
    a. Religion
    b. Race

c. Pathogenicity

d. Marital status

e. Behavior

28. Which of the following is not a characteristic of a non communicable disease
    a. Indefinite onset
    b. Prolonged Course of Illness
    c. Non-contagious Origin
    d. Functional Impairment or Disability
    e. Short latency period

29. Which of the following are modiafiable risk factors for lung cancer?
    a. Cigarette smoking
    b. Male sex.
    c. Middle age or older
    d. Genetic factors
    e. Race

30. Which of the following is an example of a non modifiable risk factor for breast cancer?
    a. Female sex
    b. Diet (high in saturated fatty acids and cholesterol)
    c. Physical inactivity
    d. Hypertension
    e. Cigarette smoking

Section B

31. Describe the following (10 marks each)
    a. The case control study

    b. The cohort study

32.

    a. Compare the job of a clinician and the job of an epidemiologist   (10 mks)

    b. Discuss the factors influencing the prevalence of a disease   (10 mks)